App. No. 09/682,094

In the Claims:

1-43 (cancelled)

44. (new) An electronic network control device comprising:

A processing means connected to a buffer means which is in turn connected to a communication bus which is used to connect to a plurality of remote devices where said remote devices will have individual addresses when connected to the communication bus.

45. (new) The device according to claim 44 wherein the buffer means is a high-current IIC buffer with an accompanying high impedance disconnection circuit.

46. (new) The device according to claim 44 wherein the communication bus uses the industry-standard IIC protocol.

47. (new) The device according to claim 44 wherein the processing means issues commands on the bus and as such performs as a master in regard to the networked devices connected to the IIC communication bus, which in turn perform as slaves.

48. (new) The device according to claim 44 wherein the buffer means is an IIC buffer and the buffer is connected by a high impedance disconnection circuit to the processing means, and which said disconnection circuit will disconnect said IIC buffer based on a BUS_En signal.

49. (new) The device according to claim 44 wherein said networked remote devices are connected to a peripheral device.

50. (new) The device according to claim 44 wherein said networked remote devices are microcontroller-based, and equipped for IIC communication.

51. (new) The device according to claim 44 wherein each of said connected remote devices is comprised of a microcontroller, RAM memory, ROM memory, a non-volatile memory, an IIC communication port with SCL and SDA lines, an I/O port for interconnection with an attached peripheral device, a relay port with COM, NC and NO contacts, an ADC converter for analogical voltage readings, a timer WDT, a POWER conditioning system, and an information processing means.

52. (new) The device according to claim 44 wherein a high impedance disconnection circuit in said remote device is used to disconnect remote device from said communication bus in case of device power failure, while preserving the state of the bus and allowing the rest of the system to operate normally where a connection GATE of the transistor connects to the pull-up voltage of the IIC bus where if the power of the remote device fails, or gets disconnected, the high impedance switch isolates the remote device from the network

53. The device according to claim 44 wherein the buffer is a bi-directional IIC buffer which amplifies the signal on the communication bus.

54. (new) The device according to claim 44 wherein the said high impedance switch makes it possible to use of two networks of different speeds connected to the same master where said IIC protocol is not speed dependant.

55. (new) A process for connecting a serial communication network to remote devices comprising the steps of:

Connecting a processing means to a buffer means, connecting the buffer means to a communication bus and connecting the communication bus to a plurality of remote devices having a default address that allows having the processing means to issue general configuration address command to a plurality of remote devices through the communication bus, to put the remote devices into a wait status, and to issue general commands to all the remote devices connected to the communication bus.

56. (new) The process according to claim 55 wherein the buffer means is a high-current IIC buffer with an accompanying high impedance disconnection circuit.

57. (new) The process according to claim 55 further comprising an IIC high current buffer and a high impedance disconnection circuit connected to an end of a bus which is connected to a IIC local network controlled by a master with a power supply that

provides energy for said master and for said bus where said Bus connects to the remote devices that are integrated into a network.

58. (new) The process according to claim 55 wherein the processing means issues commands on the bus and as such performs as a master in regard to the networked devices connected to the IIC communication bus, which in turn perform as slaves.

59. (new) The process according to claim 55 wherein the buffer means is an IIC buffer and includes connecting the buffer with a high impedance disconnection circuit to the processing means, and having said disconnection circuit disconnecting said IIC buffer based on a BUS_En signal.

60. (new) The process according to claim 55 which includes having command requests to the remote device to perform a task that can take more time to complete if said remote module 14 does not respond within this maximum timeframe, then the current process of communication is aborted and a new process of communication is started.

61. (new) The process according to claim 55 wherein depending communication speed on the speed of the clock in the SCL line, dominated by said master and slowing down the communication speed by controlling the SCL line on the SLAVE side of remote devices where said remote device holds down the SCL line as long as necessary to allow the remote device to do its job before returning the requested information

62. (new) The process according to claim 55 wherein each of said connected remote devices is comprised of a microcontroller, RAM memory, ROM memory, a non-volatile memory, an IIC communication port with SCL and SDA lines, an I/O port for interconnection with a peripheral device, a relay port with COM, NC and NO contacts, an ADC converter for analogical voltage readings, a timer WDT, a POWER conditioning system, and an information processing means.

63. (new) The process according to claim 55 which includes the step of connecting the communication bus to the remote devices through a high impedance disconnection means.

64. (new) The process according to claim 55 which adds the step of amplifying the signal on the communication bus using a bi-directional IIC buffer.

65. (new) The device according to claim 55 wherein said the high impedance switch makes it possible to use of two networks of different speeds connected to the same master.